

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

PCT

To:

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NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing  
(day/month/year)

06.08.2004

Applicant's or agent's file reference  
AD6907PCT

## IMPORTANT NOTIFICATION

International application No.  
PCT/US 03/26193

International filing date (day/month/year)  
20.08.2003

Priority date (day/month/year)  
20.08.2002

Applicant  
E. I. DU PONT DE NEMOURS AND COMPANY et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

### 4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

EEEL NOTED

20 Feb 2005  
Name and mailing address of the international  
preliminary examining authority:



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**INTERNATIONAL PRELIMINARY EXAMINATION REPORT**  
 (PCT Article 36 and Rule 70)

Applicant's or agent's file reference AD6907PCT	<b>FOR FURTHER ACTION</b>	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/US 03/26193	International filing date (day/month/year) 20.08.2003	Priority date (day/month/year) 20.08.2002
International Patent Classification (IPC) or both national classification and IPC B32B17/10		
Applicant E. I. DU PONT DE NEMOURS AND COMPANY et al.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion      II <input type="checkbox"/> Priority      III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability      IV <input type="checkbox"/> Lack of unity of invention      V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement      VI <input type="checkbox"/> Certain documents cited      VII <input type="checkbox"/> Certain defects in the international application      VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand 10.03.2004	Date of completion of this report 06.08.2004
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer  Seiberlich, P  Telephone No. +49 89 2399-8663



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No.

PCT/US 03/26193

**I. Basis of the report**

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

**Description, Pages**

1-16 as originally filed

**Claims, Numbers**

1-35 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT**

International application No. PCT/US 03/26193

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Yes: Claims	1-35
	No: Claims	
Inventive step (IS)	Yes: Claims	1-35
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-35
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US 03/26193

**Re Item V**

**Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

Reference is made to the following document/s/:

- D1: US-A-6 077 374
- D2: WO 02/18154 A
- D3: WO 01/30919 A

**1. Novelty**

1.1 Document D1, which is considered to represent the most relevant state of the art to the subject-matter of the present application, discloses a method for preparing a laminated safety glazing by laminating an interlayer based on PVB between two layers of glass. The interlayer has a regular roughness profile embossed on one surface ( $R_z$  of  $30 \mu\text{m}$ ) and a randomized rough structure on the other surface ( $R_z$  of  $30-35 \mu\text{m}$ ). It is capable of strongly bonding to a rigid panel such as glass to form an impact-dissipating layer in a laminated safety glass assembly.

1.2 As regards the frequency of the interlayer surface, the applicant's attention is drawn to the following points:

Claims 2, 23 and 31 define a feature of the claimed interlayer sheets in terms of a parameter, namely the frequency.

For the definition of a parameter to be clear, the method for its determination should be specified. In the present case, the method to determine the parameter is not adequately disclosed in the specification (see e.g. present page 12). However, a limitative feature neither clearly defined in the application as filed nor unambiguously derivable from the original disclosure and the common general knowledge in the field of laminates cannot be accepted (Article 6 PCT).

Claims 1 and 23 do not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. The claims attempt to define the subject-matter in terms of the result to be achieved (i.e. to achieve an adhesive strength of at least 1000 psi) which merely amounts to a statement of the underlying problem. The technical features necessary for achieving this result should be added.

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/US 03/26193

1.3 The interlayer sheets disclosed in D1 differ from those according to the present application in the absence of a printed image obtained by means of a specific pigmented ink.

Thus, insofar as the claims can be understood (see above under 1.2), the claimed subject-matter (claims 1-35) appears to be novel over the available state of the art (Article 33(2) PCT).

**2. Inventive Step**

The problem to be solved by the present application may be regarded as to provide laminates having a good quality printed thermoplastic interlayer and at the same time maintaining strength and resilience against breakage.

This problem is solved in the present application by ink-jet printing a digital image using a specific pigmented ink composition.

It was clear from document D1 that these interlayer sheet may contain additives including dyes or pigment colorants. However, D1 is silent as regards image forming processes.

It was generally known to produce images on interlayers e.g. for safety glazing; see e.g. document D2. The images are printed onto the interlayer material using e.g. ink, paint or dye systems. However, D2 is silent as regards the specific pigments used according to the present application.

Document D3, on the other hand, discloses amongst others pigments such as Pigment Red 122, Pigment Red 202, Pigment Violet 19, Pigment Yellow 128 and Pigment Blue 15:4; cf. D3, page 5 and examples. The pigmented inks of D3 are printed by means of ink jet printers onto various substrates including papers, transparency materials, textile materials, plastics or polymeric films. However, there is no incentive in document D3 for the skilled person to select the specific pigmented inks and combine these inks with interlayer materials suitable for glazing purposes.

Thus, it appears that the subject-matter of present claims 1 to 35 meets the requirements of Article 33(3) PCT.